Argus C3 (1947)

CLA
Tim Langsford, September 2020

(Based upon Lesson 10 – National Camera Repair course, hosted on https://learncamerarepair.com/)

Preliminary Examination:

Optics filthy. Visible gap between shutter blades even when closed. Incredibly stiff focusing, particularly at the further distances (doesn't go to infinity). Crumbling leatherette. This example is dated as 1947 based on serial number via this excellent website:

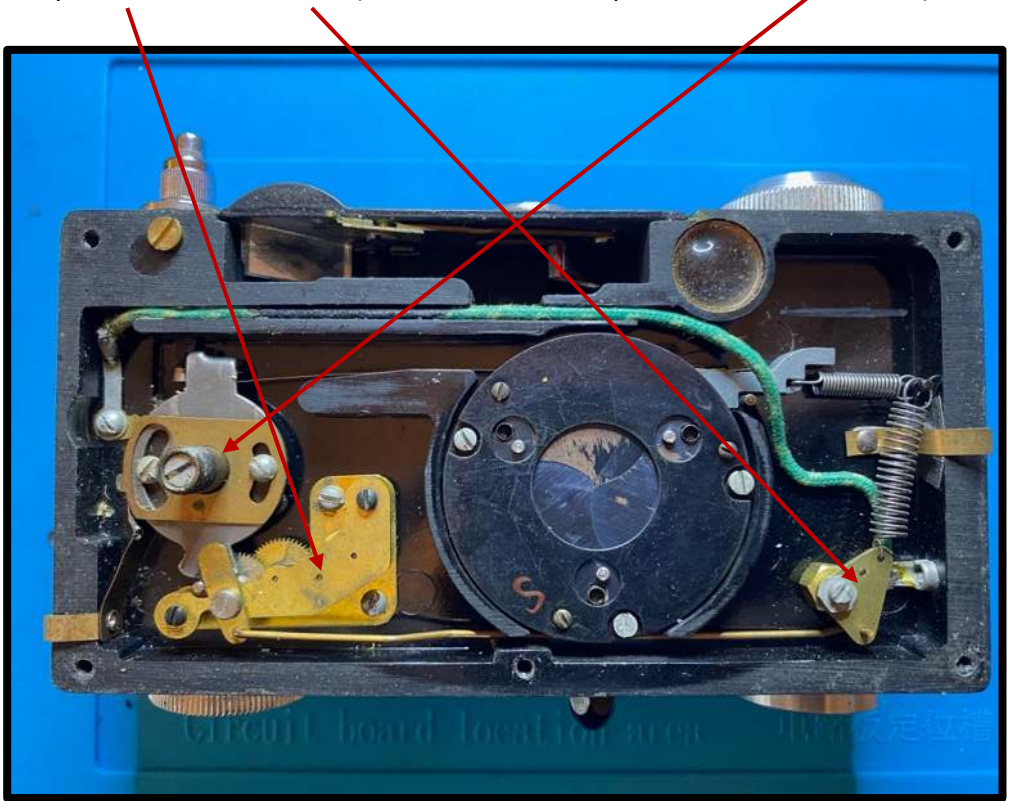
http://argusinfo.net/DatingGuide/DatingYourArgus.htm

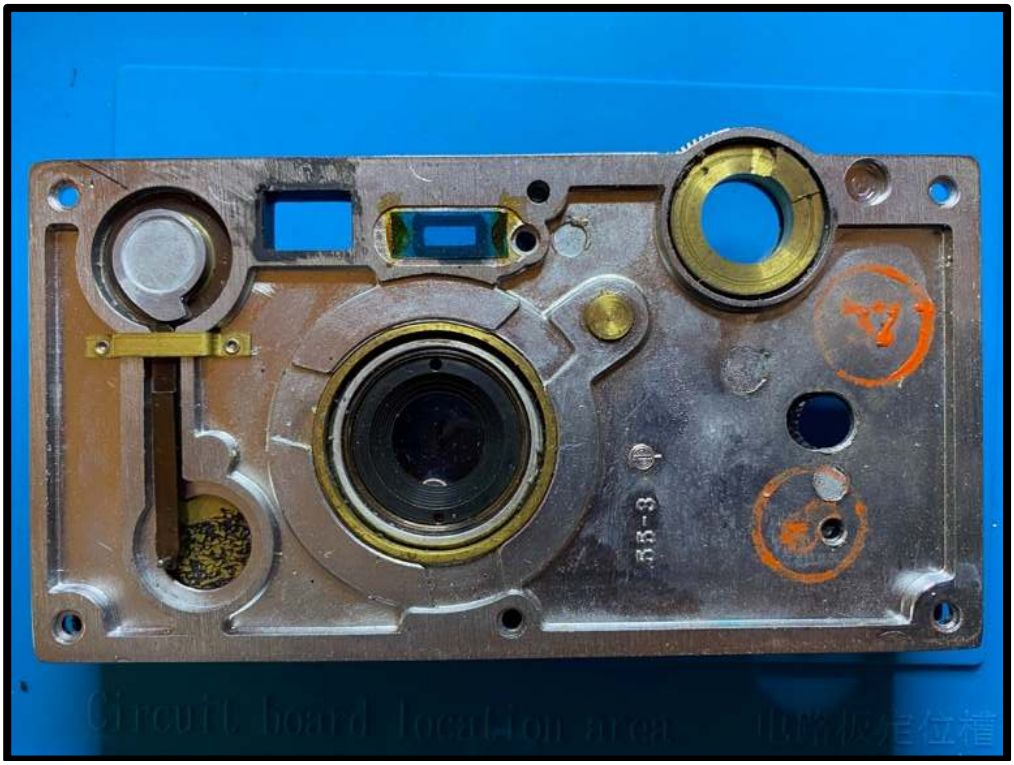
1. Remove cocking lever by first loosening right-hand set screw and then rotating lever anti-clockwise. Be aware of variations, some later versions have a jam nut under the lever which is left-hand thread.

2. Remove the 6 front plate screws, all situated underneath the leatherette. Note position of long screw (next to rangefinder window). At this point, I realised how decrepit the leatherette was, but I still had misguided hopes of saving it.

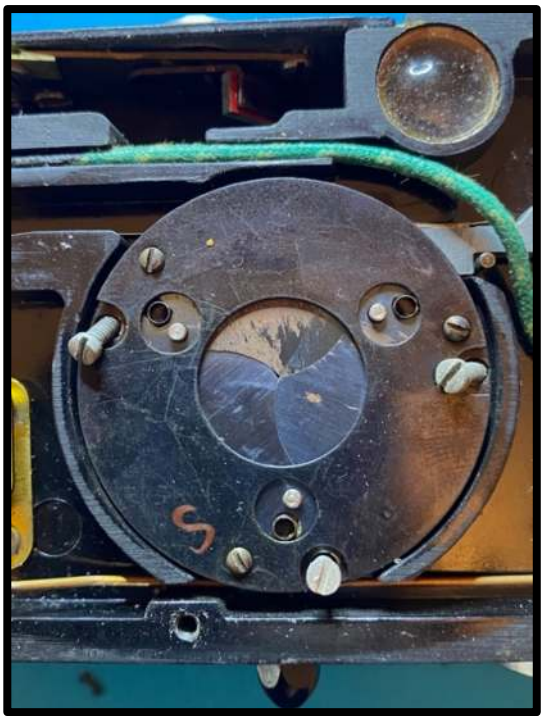
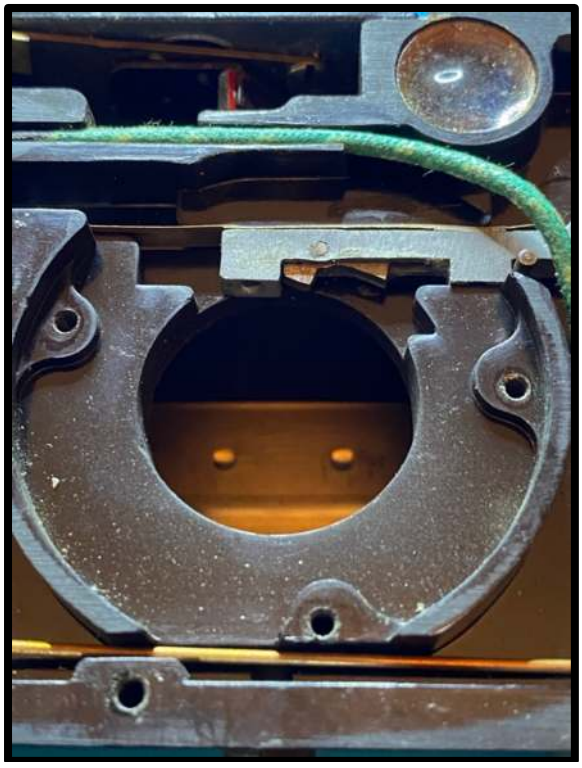
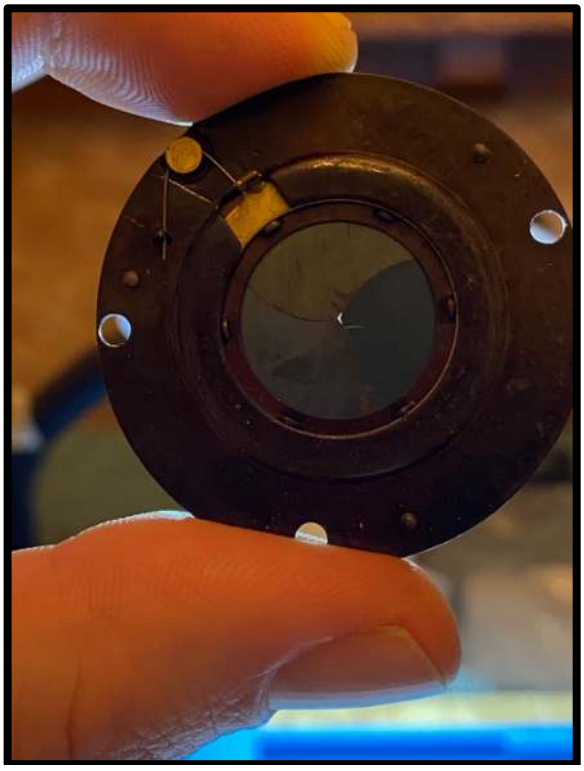
RANGE FINDER
50MM ARGUS COATED CINTAR

3. Lift off front plate. Be aware that the cam follower is loose. The eyepiece lens may be loose too. With the front plate removed, you can see the main lever, speeds escapement and bell crank (which receives the pin on the cam follower).

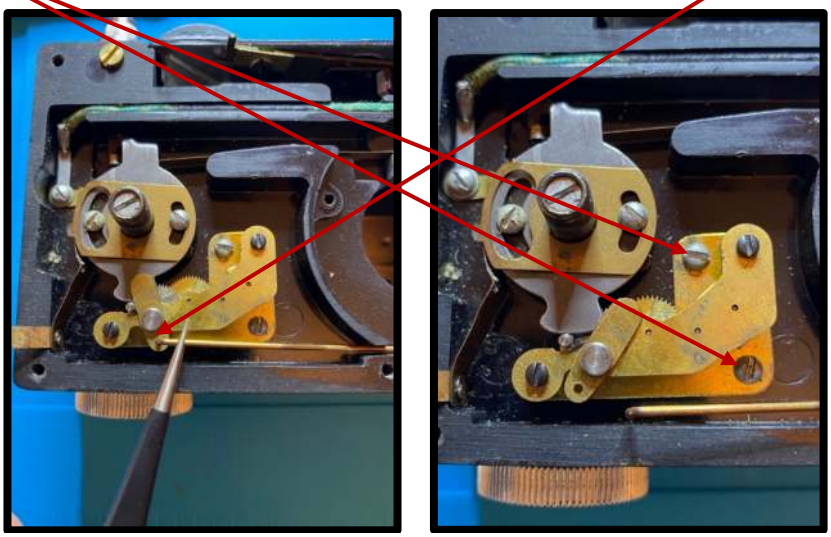


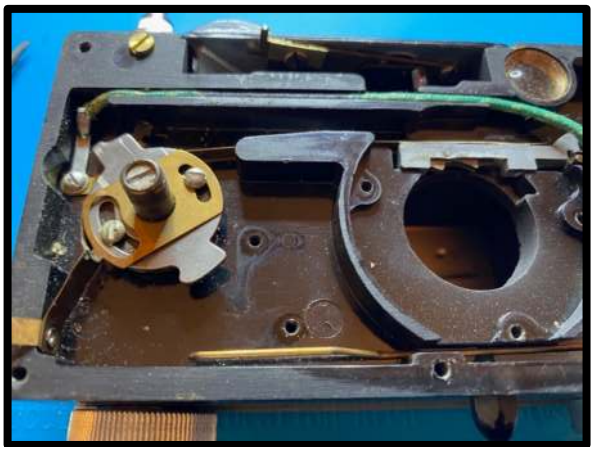


4. Next, remove the shutter blade assembly. Note position of the long screw at the bottom. The 4th photo clearly shows the gap in the blades I noticed when I received this camera.

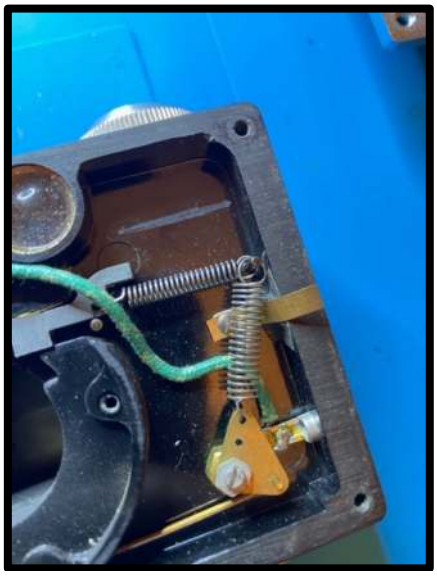




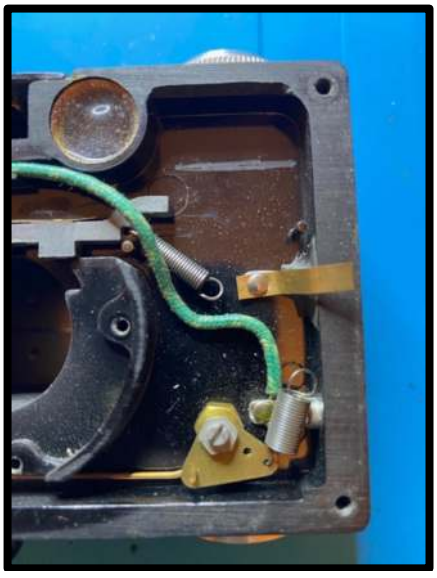
5. To remove the speeds escapement, first lift the wire link from the retard lever, the other end of which is attached to the bell crank. Remove the 2 escapement retaining screws and lift the mechanism out.



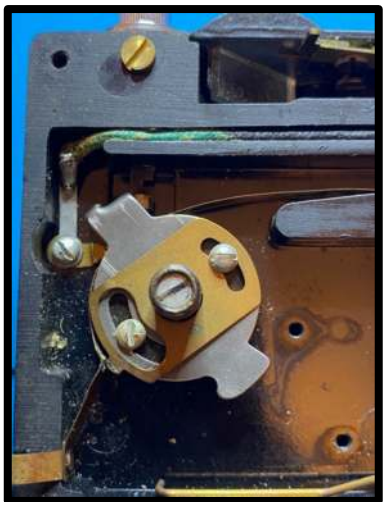
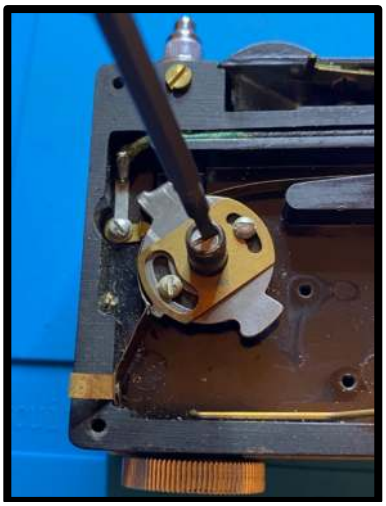
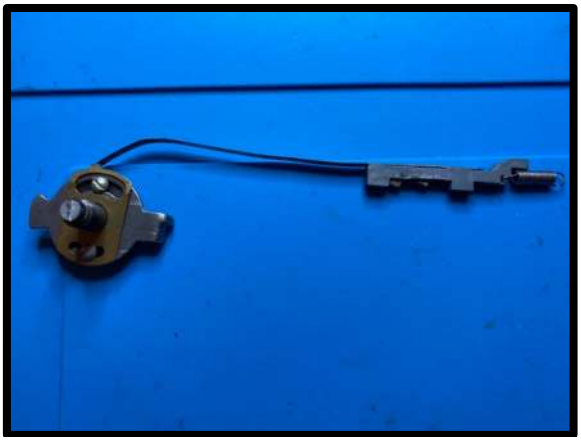
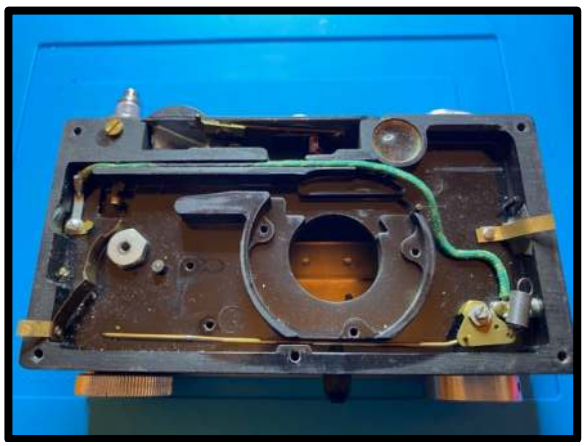


6. Detach the two tension springs (bell crank spring and mainspring) from their post.

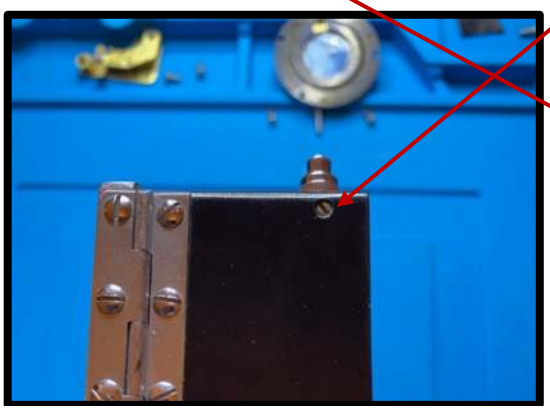
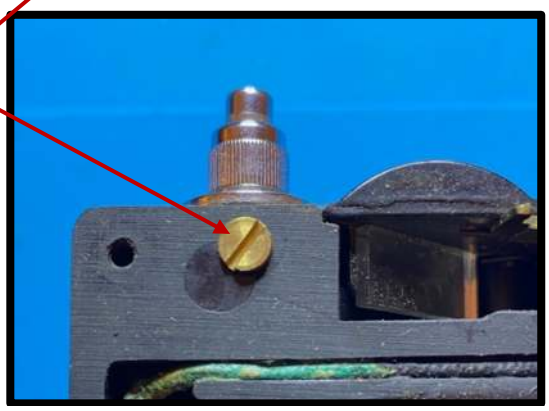




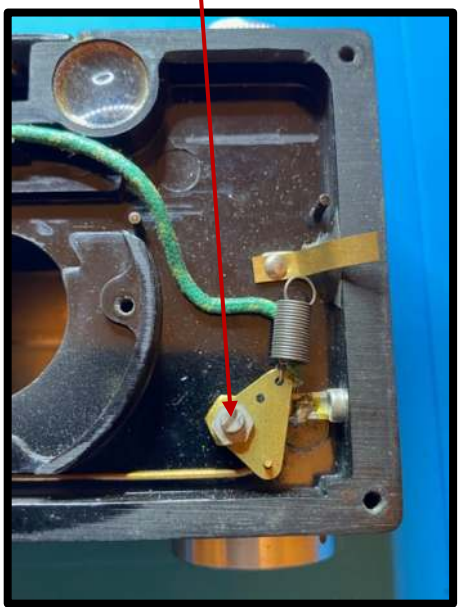
7. Remove the main lever and shuttlecock assembly by removing the lever's central screw. The whole assembly is then lifted out.

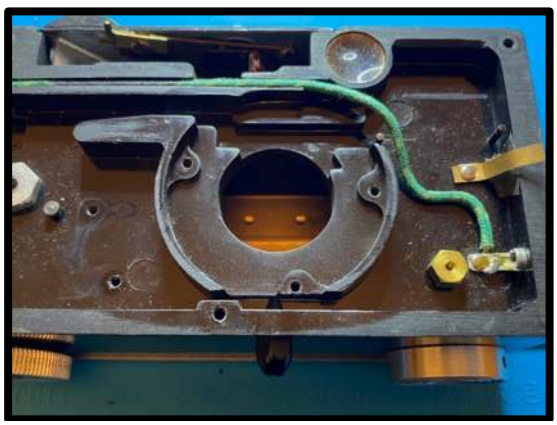





8. Remove the release plunger by first taking out the setscrew on the side of the camera. Be aware of the spring and ball detent inside this cavity. Then remove the brass pin screw on the front of the camera. The plunger assembly can now be lifted out.

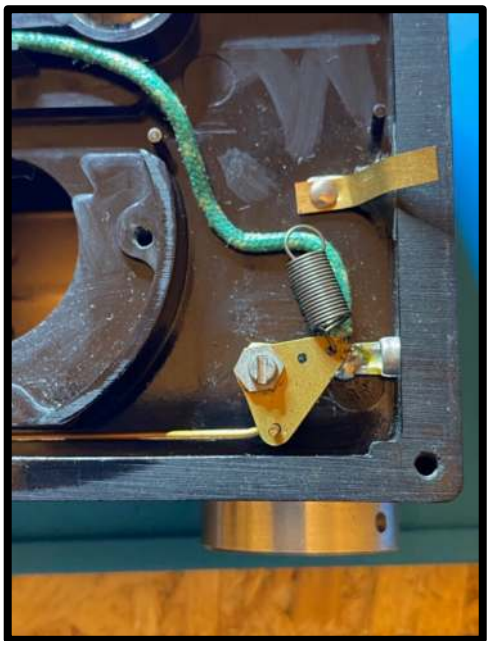
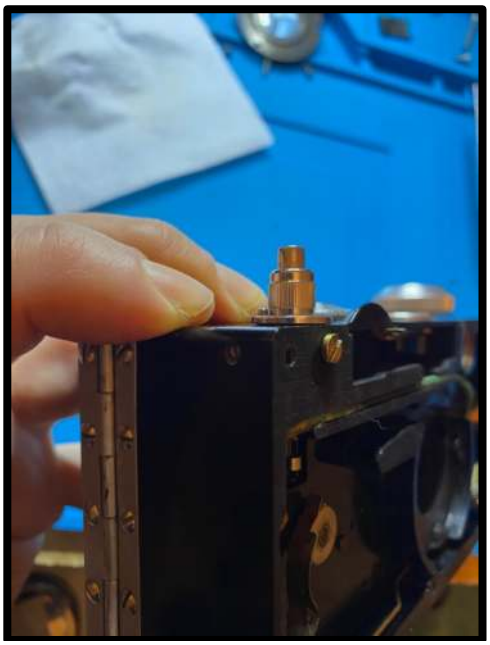
9. Remove the bell crank via its single screw. This screw also holds the eccentric bearing, used to adjust shutter speeds.

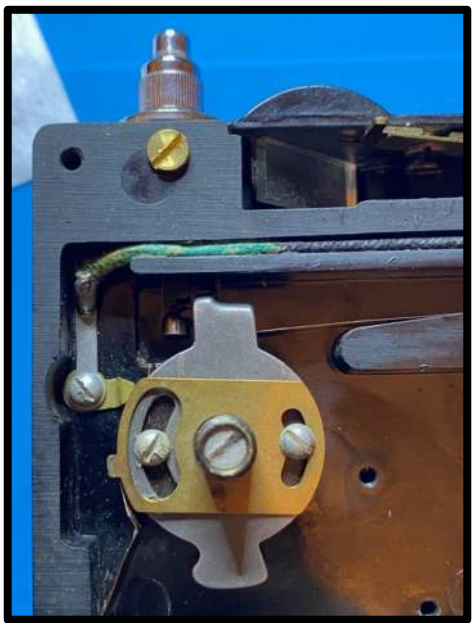


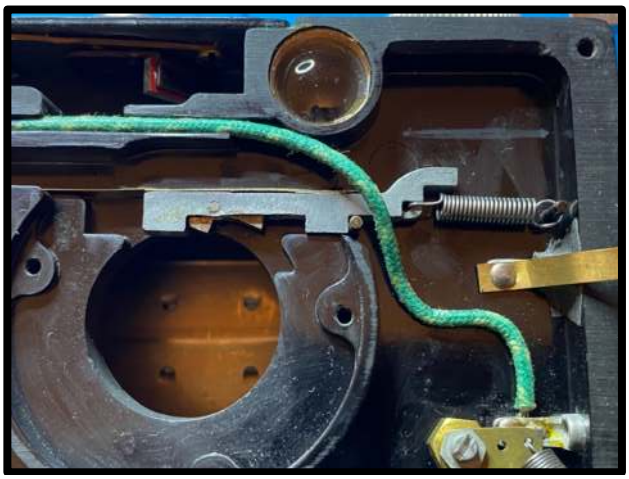


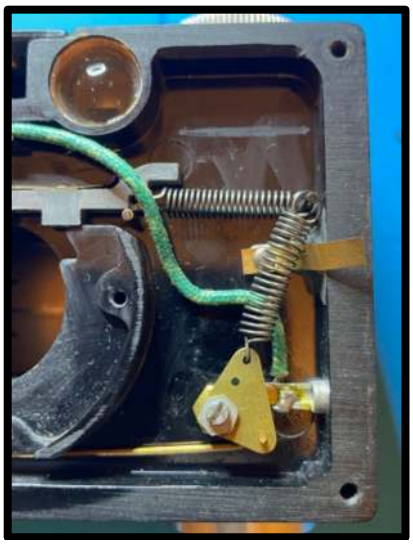
10. Now is as good a time as any to clean the optics in viewfinder and rangefinder then reinstall.

11. After a bit of a clean it's time to reinstall the bell crank, release plunger (be aware that the tightness of the setscrew determines the I and B indent tightness) and main lever/shuttlecock assemblies. Then reattach the springs (be aware of their order).

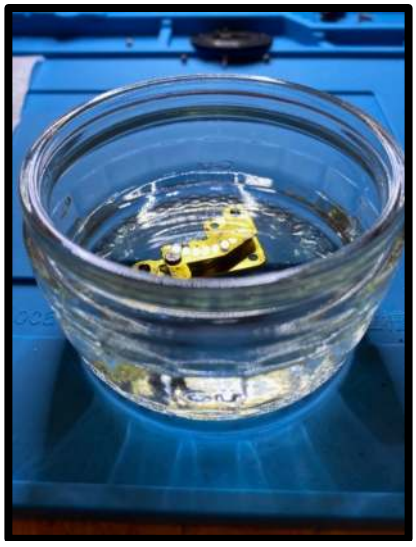









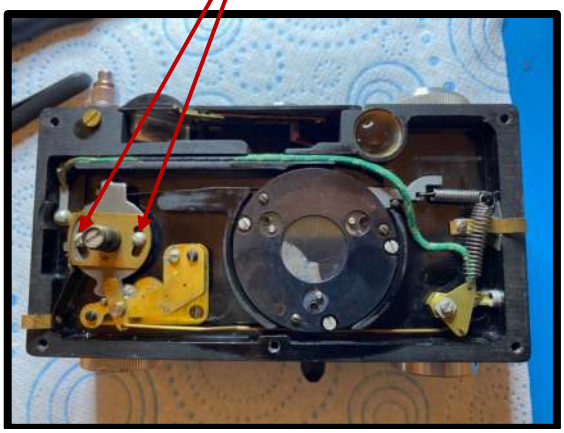
12. Clean, lubricate (at pivot points) and reinstall the speeds escapement.

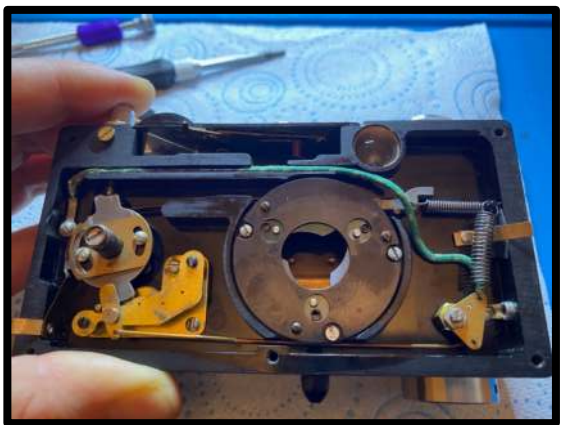


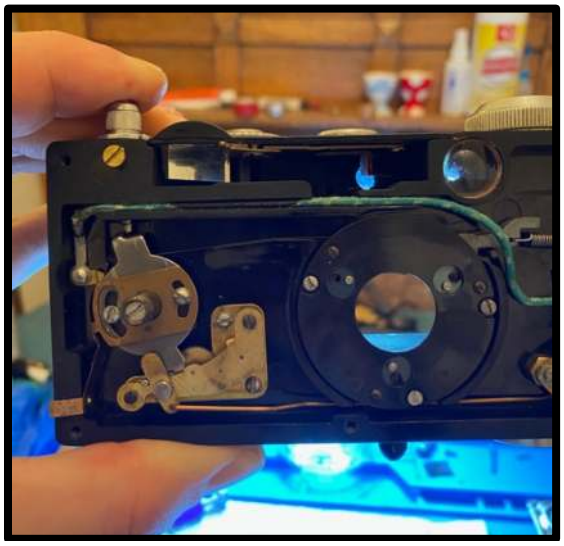
13. Disassemble the shutter housing and clean the blades and all parts, then reassemble.

14. Reinstall the shutter housing.

15. Set the release plunger to bulb and test the shutter: adjust the main lever via its 2 adjustment screws until the shutter blades are fully open when the shutter is held open.



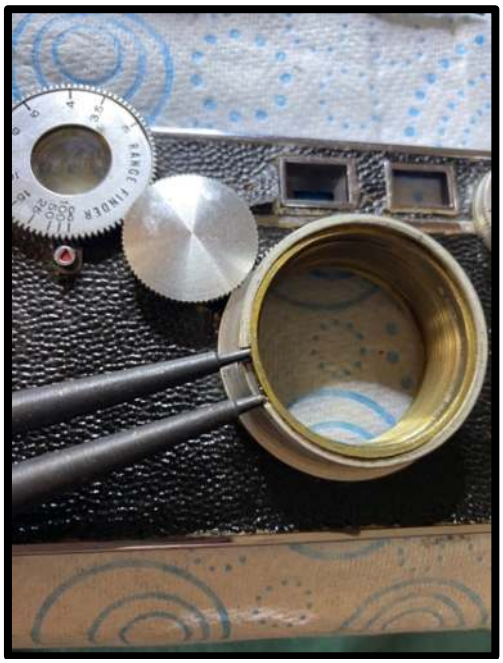




16. Clean rear optics. For these elements, I found that some lens cleaning fluid was all that was needed.

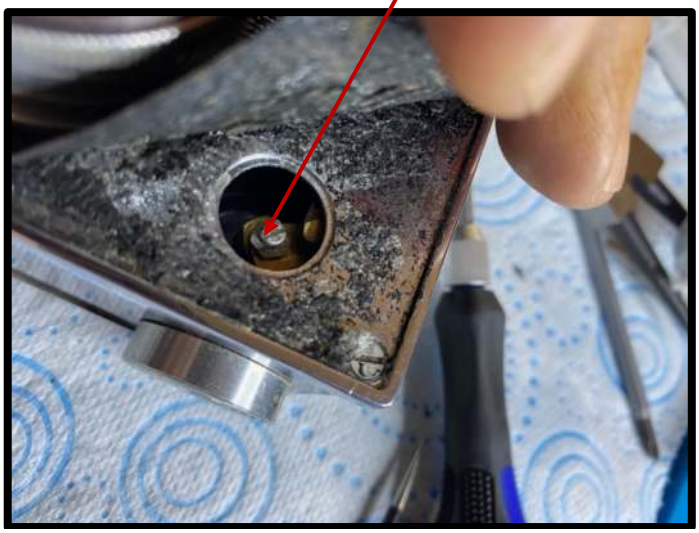
17. Remove the diaphragm assembly. Thankfully, the diaphragm blades are attached to their housing, making reassembly much easier than on other cameras!

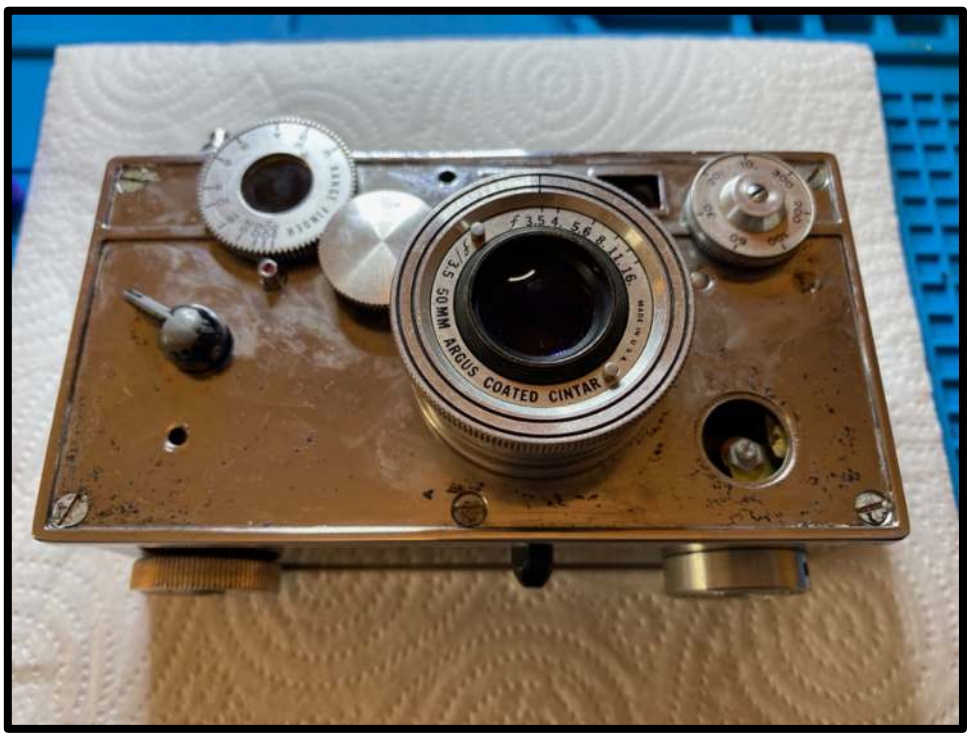
18. Remove and clean front optics and focusing mechanism. The front and middle elements can be further disassembled to clean between, I chose not to do this. I did however clean off the old helicoid grease and apply new.



19. At this point I decided to remove the leatherette as it was beyond help and I realised there's some beautiful chrome under there!

20. Reassemble the lenses and diaphragm. When reattaching the front plate, ensure the pin on the cam follower connects properly with the hole on the bell crank. When the leatherette is not removed, there is an inspection disc which covers this cavity. Shutter speed is adjusted by altering the placement of the eccentric bearing to ensure no retard engagement at the fastest speed (1/300).





21. To adjust the rangefinder calibration, remove the access plate and adjust the screws to taste (sorry to not be more scientific about this, but I found a little tinkering easily got things sorted).

Testing:

I self-developed some Kentmere 100 test shots at home in ID-11 (ilford) developer (1+1), at 20˚C for 11.5 minutes. Once dry, the negatives were scanned using a Plustek 8100 to create large .dng files, and then had a quick pass through Lightroom to invert and add a little contrast before exporting as .jpeg.